CALIFORNIA DIVISION OF MINES AND GEOLOGY
**FAULT EVALUATION REPORT FER-219**
**SUPPLEMENT No. 1**

# OAK RIDGE AND RELATED FAULTS
VICINITY OF FILLMORE AND SANTA PAULA
Ventura County, California

by
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## Introduction

The Oak Ridge fault was previously evaluated (Treiman, 1990) and portions of the fault were found to be sufficiently active and well-defined for zoning under the Alquist-Priolo Earthquake Fault Zoning Act (Hart and Bryant, 1997). The purpose of this supplement is to present evidence justifying the removal of a portion of the fault zone identified in 1990. This revision will affect zoning on the Moorpark and Fillmore quadrangles (CDMG, 1991a,b), and those quadrangles should be revised when practical.

## Background

Among the features zoned in 1991 was a one kilometer long, slightly sinuous, 1.5m-high scarp-like feature that crossed the Moorpark-Fillmore quadrangle boundary in the community of Bardsdale (Figure 1). The scarp is about one kilometer north of, and parallel to, an alignment of similar discontinuous scarps. The scarp to the south had been previously investigated and found to be associated with Holocene faulting (Yeats and others, 1986). The more northerly scarp was identified in aerial photographs and in the field. It was noted at the time that it might be related to a more obvious erosional escarpment about 2km to the east, but due to a slightly different orientation and location near a previously inferred fault trace it was decided to include the fault within a new Earthquake Fault Zone (Treiman, 1990).

## Recent Findings

Research trenching in May 1997, under the direction of Dr. James Dolan (University of Southern California), across the northern scarp demonstrated that the surface topographic feature was the product of lateral stream erosion. Fluvial deposits were unfaulted and undeformed. A channel of well-bedded sand coincided with the topographic scarp. The trench is located on Figure 1.

Additional trenching, in July 1997 (also under direction of Dr. Dolan), across the Bardsdale scarp, west of the cemetery, confirmed that this feature is associated with young surface faulting. The trench exposed deformed alluvial sediments with pervasive trans-tensional faulting.

Both of these trenches were observed by the writer.

Recommendations

The short (~1km) Earthquake Fault Zone on the Moorpark and Fillmore quadrangles (as indicated on Figure 1) should be deleted from the Official Zone Maps (CDMG, 1997a,b) when these maps are otherwise revised. Pending such revisions, the indicated zone should be considered to be no longer in effect.

Report reviewed and approved
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References


CDMG, 1997a, State of California Earthquake Fault Zones, Fillmore quadrangle , revised official map: California Division of Mines and Geology, effective November 1, 1991, 1:24,000

CDMG, 1997b, State of California Earthquake Fault Zones, Moorpark quadrangle , official map: California Division of Mines and Geology, effective November 1, 1991, 1:24,000

Hart, E.W., and Bryant, W.A., 1997, Fault rupture hazard zones in California, Alquist-Priolo Earthquake Fault Zoning Act with index to Earthquake Fault Zone maps: California Division of Mines and Geology Special Publication 42, revised 1997, 38p.

Treiman, J.A., 1990, Oak Ridge and related faults, vicinity of Fillmore and Santa Paula, Ventura County, California: California Division of Mines and Geology, unpublished Fault Evaluation Report FER-219, October 12, 1990, 10p.

Yeats, R.S., Gardner, D.A., and Rockwell, T.K., 1986, Oak Ridge fault, Ventura basin, California: slip rates and late Quaternary history: in Jacobson,M.L., and Rodriguez, T.R., compilers, National Earthquake Hazards Reduction Program, Summaries of Technical Reports Volume XXIII: U.S.Geological Survey Open-File Report 87-63, pp.179-182.

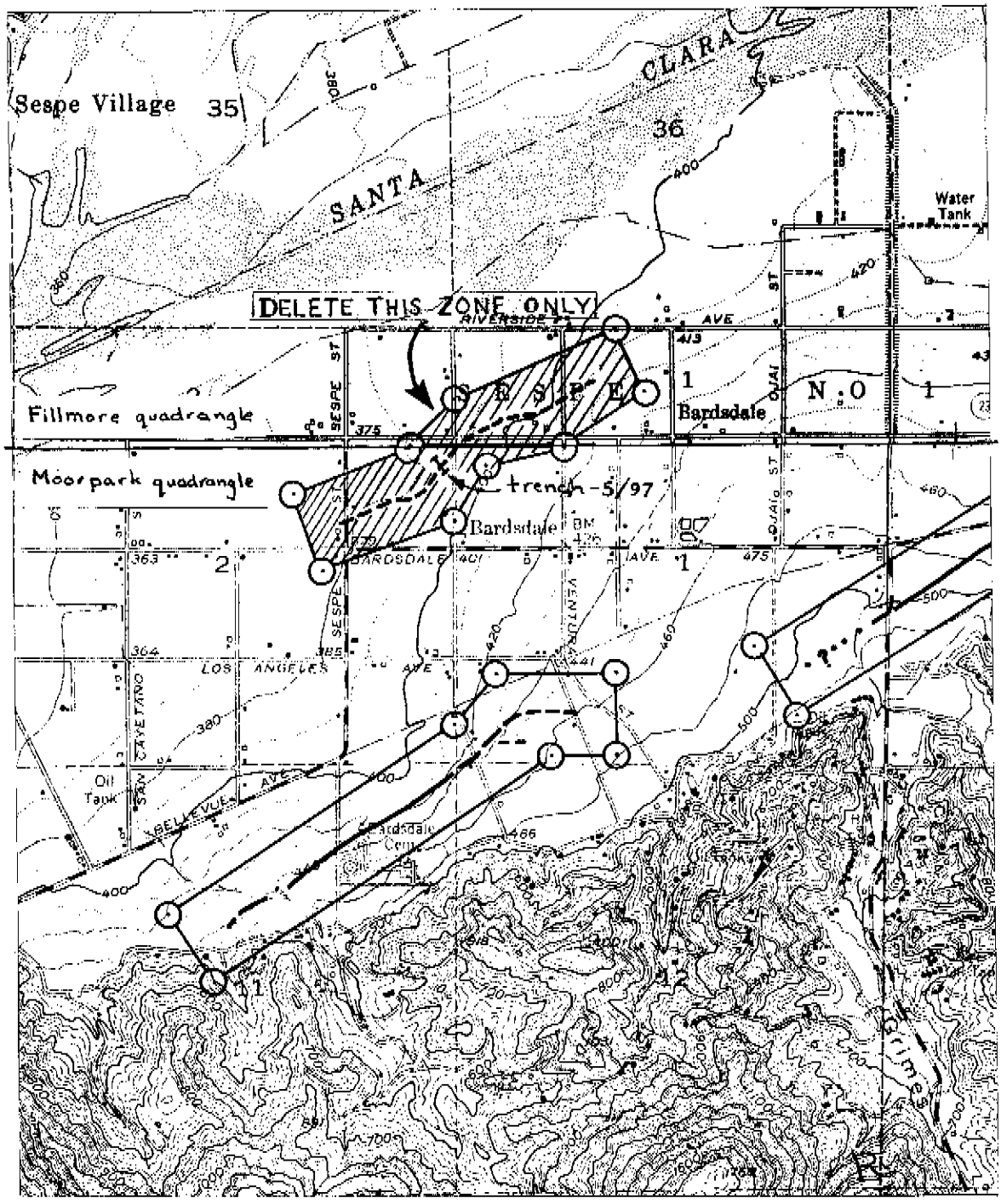


Figure 1 (FER-219, supplement) - a portion of the Official Earthquake Fault Zone Maps for the Fillmore and Moorpark quadrangles (CDMG, 1991a,b) showing the fault zone recommended for deletion.

HOWARTH SITE - BARDSDALE
WEST WALL
LOGGED 5-19 to 5-25, 1997
J. Beard
J. Dolan
M. Glasscoe
K. Weaver

Scale 1 inch = 2 m
(~1:80)
No V.E.: Vert. = Horiz.

total scarp height ~ 1.9-2.0 m

| | |
|---|---|
| 26.5 | 95 cm |
| 26.0 | 100 |
| 25.0 | 95 |
| 24.0 | 80 |
| 23.0 | 65 |
| 22.0 | 70 |

B Bt horizon
bt = bioturbated
fg = fine grained
gravels + coarse ss

1 sq = 40 cm
1 lg sq = 1 m